Acute Coronary Syndromes

FREQUENCY, TREATMENT AND IMPACT OF PRE-HOSPITAL CARDIAC ARREST AMONG PATIENTS WITH STEMI: A REPORT FROM THE ACTION REGISTRY®-GWTG™ AND MISSION:LIFELINE

Poster Contributions
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Background: The presence of cardiac arrest (CA) in patients (pts) with ST elevation MI (STEMI) is associated with worse outcomes, but the processes of care and outcomes for these pts have not been assessed in contemporary US practice.

Methods: We evaluated STEMI pts enrolled in the ACTION Registry®-GWTG™ from 4/1/11-6/30/12. In all pts, clinical variables were compared by the presence or absence of CA. In pts who underwent primary PCI, in-hospital outcomes were compared by the presence or absence of CA.

Results: Of 49,279 STEMI pts from 451 US primary PCI hospitals, 3,716 (7.5%) had CA. CA pts had worse renal function, more heart failure and shock on presentation, and higher ACTION mortality risk scores (TABLE, all p-values < 0.001). Primary PCI was performed in most pts with and without CA (81.6% vs 81.4%). In pts who had primary PCI, mortality was significantly higher in CA pts (24% vs 2.9%), a finding present in pts with (41% vs 23%) and without (12% vs 2.0%) cardiogenic shock on presentation. Pts with shock made up 22.7% of deaths in pts without CA, but 41.4% of CA pt deaths.

Conclusions: About 8% of STEMI pts treated in this registry presented after CA. CA and cardiogenic shock frequently co-exist. Almost one-quarter of CA patients die during the hospitalization, despite aggressive primary PCI strategies. These findings highlight the need for improved systems of care for STEMI pts complicated by CA, similar to that developed in the Mission: Lifeline CA Program.

	No Cardiac Arrest	Cardiac Arrest
All patients	(n=45,563)	(n=3,716)
Median Age (IQR)	61 (52, 70)	60 (52, 70)
Male sex	70%	74%
Median initial CrCl, ml/min (IQR)	88 (63, 116)	78 (58, 102)
CHF on presentation	6.9%	15.5%
Shock on presentation	4.9%	43%
Median ACTION in-hospital mortality risk score (IQR)	32 (26, 38)	42 (32, 54)
Patients Treated with Primary PCI	(n=36,016)	(n=2,850)
In-hospital death	2.9%	24.3%
In-hospital death, pts without shock on presentation	2.0%	12.0%
In-hospital death, pts with shock on presentation	22.7%	41.4%